

SEMICONDUCTOR DEVICE WITH GOLD BUMPS, AND
METHOD AND APPARATUS OF PRODUCING THE SAME

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ABSTRACT OF THE DISCLOSURE

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10 A semiconductor device ^{includes} ~~comprises~~ a semiconductor element having electrodes and metal bumps are attached to the electrodes. The metal bumps include copper cores and gold surface layers covering the cores. In addition, the metal bumps may include gold bump elements and solder bump elements connected together.

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